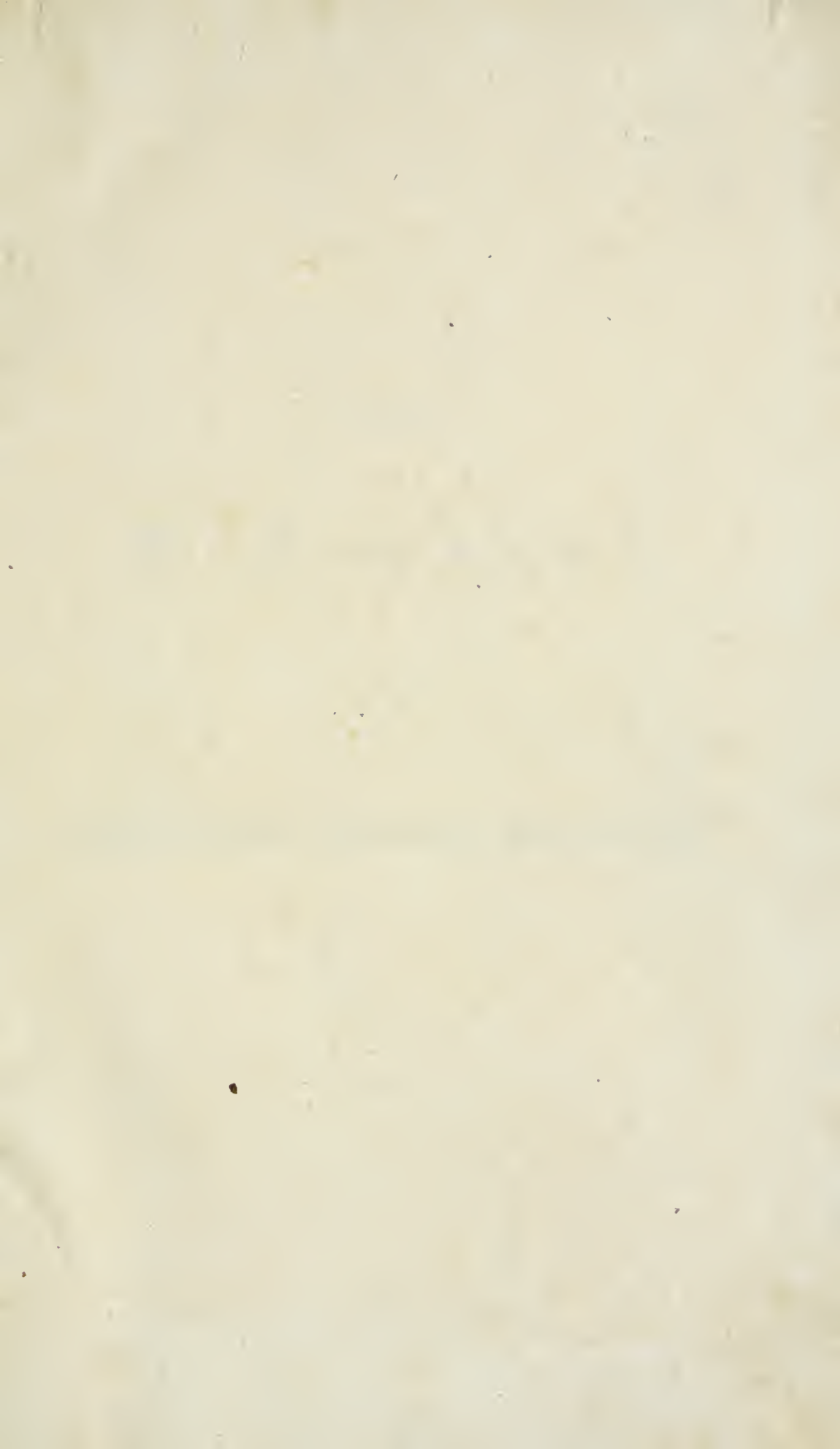



First Edition



THE
R U D I M E N T S
O F
ANCIENT ARCHITECTURE.



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T H E
R U D I M E N T S
O F
A N C I E N T A R C H I T E C T U R E ,
I N T W O P A R T S .

C O N T A I N I N G

An Historical Account of the FIVE ORDERS, with their Proportions and
Examples of each from the ANTIQUES ;

A L S O

VITRUVIUS on the Temples and Intercolumniations, &c. of the Ancients.

Calculated for the Use of those who wish to attain a summary Knowledge of the
SCIENCE of ARCHITECTURE.

W I T H

A D I C T I O N A R Y O F T E R M S .

I L L U S T R A T E D W I T H T E N P L A T E S .



L O N D O N :

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MDCCLXXXIX.

P R E F A C E.

CUSTOM has established the necessity of a preface, which may also be considered as a privilege, authors enjoying therein liberty to explain, and plead for their labours. Much pleading I am not qualified for, nor perhaps entitled to; I therefore submit to the candor of those, who, by the purchase and perusal of this work, have some claim to pass judgment upon it: the great difference between a perfect work and a good intent, encourages me to explain.

ARCHITECTURE, as a liberal science, and considered as connected with the study of antiquities, is a subject on which every person of taste and reading,

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at some time or other, has occasion for information ; yet that precision in rules necessary to a professional man, is not the kind of knowledge wanted ; but something more general which will not fatigue the mind to understand, or burthen the memory to recollect. Under this impression, I make public what was originally designed for mere amusement.

THE guide I followed in selecting and illustrating, was, a recollection of the wants I formerly felt, when desirous of a general knowledge of Architecture. Many treatises there are on the subject ; but as I chiefly sought amusement, the sight of large and intricate works damped the ardour of enquiry, and more than once repelled the thirst of knowledge. To understand the productions of scientific writers, required an exertion of
attention

attention mere amusement startled at ; however, at last activity was roused by the inconvenience of ignorance, and fortunately meeting with Sir W. CHAMBERS'S excellent treatise, the path was considerably smoothened, and trod with greater pleasure than at first I expected : from this and other books I was afterwards induced to examine, the following sheets may be considered as notes or minutes, of what is necessary to be known by one, whose desire, as mine was, is rather general information, than of the minutiae of the science.—In this view, I hope there will be found sufficient to give a tolerably precise idea of the five orders, and their several parts ; the engravings exhibit their general effect, and are selected from antiques which have ever been respected for their proportion and elegance : these, with the deviations of modern times, and the historical account of each order,

will, I flatter myself, render the acquiring a knowledge of the subject both easy and entertaining; yet sufficiently accurate to enable a gentleman to sketch any drawing of Architecture, fancy or necessity may prompt him to have executed, without erring much from the general rules of design, and from which a workman will readily reduce the smaller parts to the exactness requisite to be worked from.

THE frontispiece shews each order drawn to the same height; that their relative proportion and strength may be seen at one view.

THAT information might not stop at the beginning of the science, I have translated from Vitruvius, what his excellent pen has recorded, as the rules of the ancients in building their edifices, or temples, the distribution of columns, and their diminutions. These
will,

will, I hope, also be found useful to travellers who visit the remains of ancient architectural splendor and magnificence ; as in a pocket volume they will have examples of the five orders, with the laws observed by the ancients in the great outline of their public structures, by what name and character each order of building is distinguished, with rules for adjusting the columns ; from which, an edifice, though in ruins, may, with considerable certainty, be restored to its original form.

I HAVE also added a Dictionary, or explanation of terms used by artists, to express the several parts of buildings ; this will, I hope, assist, as well travellers, as those who read the accounts of professional men ; it will facilitate understanding their labours, and, of course, render them more pleasant.

I HOPE,

I HOPE, in its general acceptance, the title of *Ancient Architecture* will be allowed to the following sheets, though noticing only the Greek and Roman styles ; omitting to mention those very ancient efforts in the science, traces of which remain in Upper Egypt, and in many parts of India, the æra of whose foundation is so remote, that no certainty can be formed of their age ; they evidence much labour and magnificence. Also Gothic Architecture I have avoided mentioning, not because I think slight of, or disapprove that light though firm, and grave though pleasant kind of Architecture, of which this country boasts the best and most complete specimens. The effect of awe and reverence this kind of building always produces in the mind, is one of the strongest proofs which can be given of its propriety and fitness, for large sacred buildings.

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These I have avoided, confining myself to the Greek and Roman files, which may truly be called classical, and which are in most general request and use.

UPON the whole, my endeavour is intended more for the gentleman than the artist.—How far I have succeeded in the several particulars, I leave to others to determine, assuring them I have spared no pains to be both accurate and useful.

THE portrait in the title page, is of the celebrated JAMES STUART, Esq. generally known by the appellation of *Athenian Stuart*: this is copied from an impression of a plate intended for his promised volume. From a personal knowledge of Mr. STUART, I can say, this is an extraordinary good likeness, which from my respect to the man, as well as to a great artist, I beg leave to multiply.

R U D I M E N T S

O F

ANCIENT ARCHITECTURE.

P A R T T H E F I R S T .

THE study of Architecture has, in every enlightened age, and by every civilized nation, been held in very honourable esteem; as a necessary and pleasing science, and of evident utility.

WHEN we consider it as improved by the Greeks about the time of PERICLES, its perfection and beauty, how conspicuously it exhibited the liberality, splendour, and magnificence of those concerned in erecting structures, the remains of

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which astonish us ; and how highly flattering it was to the mind of man in an age of splendour, to raise edifices which should strike beholders with admiration ; it excites little surprise that every attention should have been given to the study of architecture, and that its professors should have received the most liberal encouragement from men of taste, anxious for renown.

PERSONS of the most exalted stations have honoured it as students, and thought it not beneath them to attend to its rules.

IN present times, among ourselves, we have instances of dignified persons studying the rules of architecture, which, united to true taste, have produced designs that would honour the genius of the highest professors.

ANIMATED by such examples, it is not surprising the science should now be regarded with considerable attention : the frequent tours to Italy, and other parts celebrated for elegant edifices, though now in ruins, have with the love
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of, spread a vast knowledge and justness of taste among our nobility and gentry, whose leisure has afforded opportunity for exploring those remains of ancient grandeur; add to this, the great industry and attention of some of our most celebrated architects in examining and delineating these standards of art. The liberal encouragement these have experienced, has enabled them to publish their labours, which now furnish ourselves at home, with most advantages acquirable from visits to Rome, Athens, &c.

THE important use of this science, and the elegant accomplishment connected with its study, have almost rendered a knowledge of it requisite to the education of men of fashion and taste. My intention is not to enter into a detail of encomiums on the art; but merely to remark its great utility, and by what high characters its study has been, and is honoured.

I PROCEED, therefore, to my more im-

mediate design, which is, to give a short historical account of the five orders of Architecture of the ancients; which must be considered as the basis of true proportion.

THE great antiquity of building is self-evident: "When men first felt the inclemencies of the seasons, it had its beginning, and has spread wherever the severities of climate demand shelter or shade: it is to be traced in the Indian's hut, and the Greenlander's cave; and shews in those barbarous parts of the globe, from what mean original it rose to its present glory." And perhaps the neighbourly assistance required in erecting the meanest fence against the inclemency of the weather, was the first introduction of civil society: thus a number of habitations were formed together, and men, in consequence, had mutual conversation and intimacy. It is easy to conceive, that, in this early state of society, genius had expanded but little; the first efforts were small, and the structure
simple;

simple; perhaps no more than a number of trees leaning together at the top (in the form of a cone), interwoven with twigs, and plaistered with mud, to exclude air, and complete the work. In this early period, we may suppose each desirous to render his own habitation more convenient than his neighbours, by improving on what had been already done: thus in time, observation, assisting that natural sagacity inherent even in uncultivated minds, led them to consider the inconveniences of the round sort of habitation, and seek others more spacious and convenient in the square form.

THIS improvement introduced the necessity of supports for the cross beams, which were to sustain the roof: the trunks of trees were so ready an application, we cannot suppose they hesitated long in their choice. Thus from the nature of things arose the idea of what we now call columns, which have from time to time

undergone many changes, and at last have produced those elegant pillars which we term the orders of architecture.

To attempt producing an authority or origin for every species of ornament attending the orders, would be wandering in a maze of uncertainty, attended with much labour, and little recompense : the general parts may, with more certainty, have their origin pointed out.

THE *Plinth*, it is very reasonable to imagine, was, at first, simply a square tile or stone, placed under the trunk of the tree or primitive column, to prevent rotting, to which it was exposed from the constant moisture of the earth ; it also served as a more firm and solid footing to the column.

THE *Torus*, or swell above the plinth, may have originated from the root or lower part of the tree being thicker than the part above, which also fixed it more firmly on the plinth ; or, as by some it is
conjec-

conjectured to have been only a rope or bandage round the trunk, to prevent its splitting.

THE *Shaft* of the column has been already noticed.

THE idea of the *Capital*, I think, may have originally been suggested by some tree, whose arms spreading just above where it was necessary the upper parts should be cut off (to be of a proper length), the swell of the arms very likely gave the first idea of the swell of the capital, which was also attended with this advantage, by being broader on the top, it was better formed for receiving the works above.

THE *Abacus* was certainly no more than a tile or stone, placed with intent to throw off the water, and prevent its sinking into the column, which would have endangered the duration of the building.

THE *Astragals* and *Fillets* were bandages to bind the column.

THE *Architrave* we may conceive to

be the beams necessary to hold or unite the columns together.

THE *Frize* was a necessary addition to give height within.

THE *Cornice*, and its ornaments, were the ends or outer edge of the roof and rafters.

THE Denteles, Triglyphs, Modillions, &c. most likely were accidental hints improved, when to usefulness was wished to be added ornament.

THE orders as now executed, are five, and range as follow: the *Tuscan*, the *Doric*, the *Ionic*, the *Corinthian*, and the *Composite*; which are distinguished from each other by the column with its base and capital, and by the entablature.

THE *Tuscan* order is characterized by its plain and robust appearance, and is therefore used only in works, where strength and plainness are wanted; it has been used with great effect and elegance in that durable monument of ancient

cient grandeur, the Trajan column at Rome; indeed, general consent has established its proportions for such purposes, beyond all others.

THE *Doric* possesses nearly the same character for strength as the Tuscan, but is enlivened by its peculiar ornaments; the triglyph, mutule, and guttæ or drops, under the triglyph; these decorations characterize the Doric order, and in part are inseparable from it. Its proportions recommend it where united strength and grandeur are wanted.

THE *Ionic* partakes of more delicacy than either of the former, and therefore, as well as on account of its origin, is called Feminine, and not improperly compared to a matronic appearance; it is a medium between the masculine Tuscan and Doric, and the virginal slenderness of the Corinthian:—the boldness of the capital, with the beauty of the shaft, makes it eligible for porticos, frontispieces, entrances
to

to houses, &c. Denteles were first added to the cornice of this order.

THE *Corinthian* possesses more delicacy and ornament than any other order; the beauty and richness of the capital, with the delicacy of the pillar, render it very properly adapted, when magnificent elegance is required: it is frequently used for internal decoration to large or state rooms; the appearance is of virginal delicacy, and gay attire.

THE *Composite* order is the same as the Corinthian in its proportions, and nearly alike in its effects: the addition of the modern Ionic volute to the capital, gives a bolder projection. It is applicable in the same manner as the Corinthian.

THE examples chosen to exhibit the effects, and give a general idea of the proportions of the several parts at one view, are selected from antiques; these compositions having stood the test of ages, for their symmetry and effect: the modern proportions

portions in the descriptive account, I have taken from Sir WILLIAM CHAMBERS's useful Treatise on Civil Architecture. To the examples shewn in the plates, the measurements are figured to each particular member; thus, by comparing them, the variations of the moderns from the ancients may be easily known.

THE measurements are in minutes, that is, one-half of the lower diameter divided into thirty parts or minutes, which method, having fewer calculations than any other, is preferable: the projections are measured from the perpendicular of the superior and inferior parts of the column.

OF

OF THE

FIVE ORDERS.

OF the TUSCAN order little historic can be said ; its plainness of ornament gives it the first place in most treatises : there is no regular example of this among the remnants of antiquity. Vitruvius in an indistinct manner has mentioned the general proportions, but through his whole book does not refer to one structure of this order. The Trajan column at Rome is reckoned of the Tuscan order, though it has eight diameters for the height ; and the capital is certainly more ornamented than is consistent with Tuscan plainness. It is somewhat singular there should be no remains of this order ; and were it not for what little Vitruvius has written of it, it certainly might have been lost to the moderns. The plainness of its appearance,

appearance, no doubt, caused it to be neglected at Rome; but in no other place has been discovered any truly ancient example.

OF the Doric we have many remains of very ancient date, which leads me to think the Tuscan is no other than the Doric more simplified, or deprived of its ornaments to suit certain purposes, where strength and cheapness were wanted; nevertheless it is applied with propriety and effect, to the entrance of cities, large gateways, and in military architecture, where a massive strength only is required.

I HAVE selected the profile given by Palladio, he having seen some remains in Italy, which might lead him to more just ideas of what the ancients practised in this order. It certainly derived its name from the people of Tuscany, in Italy, they having first used it.

SIR WILLIAM CHAMBERS gives it the following proportions :

“ THE height of the column is fourteen
modules,

modules, or seven diameters; that of the whole entablature three modules and a half, which being divided into ten equal parts, three are for the height of the architrave; three for the frize; and the remaining four for the cornice: the capital is in height one module: the base, including the lower cincture (which is peculiar to the measurement of this order) of the shaft, is also one module; and the shaft, with its upper cincture and astragal, is twelve modules: in interior decorations, the height of the column may be fourteen modules and a half, or even fifteen modules; which increase may be in the column only."

OF the DORIC order there are many examples still remaining; some of very high antiquity, and of proportions so dissimilar to the practice of later times, that one cannot help concluding, they were produced before experience had formed the rules of art. In several buildings exhibited to us in the ruins of *Pæstum*,

Ionia, and even of *Athens*, the height of the columns does not exceed four diameters, or at most four and a half: the low appearance of these in large buildings, must surely convince us usefulness was regarded more than the laws of design. Indeed the various examples of the Doric order of these uncouth and inelegant proportions, nearly prove this to be the order of columns first used.

THOUGH the Tuscan pillar is more plain in the ornaments, and as now practised of fewer diameters; yet, as we have neither example, or authority, on which to suppose it ever much varied from the rules at present acknowledged, I think we may conclude it is no other than the Doric order, by being executed plainer (as before observed), adapted to more menial services by the inhabitants of Tuscany.

THE Doric order, which is no small mark of its antiquity, has experienced many great changes in its proportions and parts, at one time very low, as before remarked;

marked ; afterwards it was allowed six diameters, and in succeeding times eight.

VITRUVIUS allows this to be the most ancient order, and gives the following account of its origin : “ Dorus, the son of Helenis, and the nymph Optyce, built a temple in the ancient city of Argos, to the goddess Juno, which happened to be of this order, but which then had no regular proportions ; it derived its name from the patron of the building. This example, or order, was followed by all the cities of Achaia.”

“ ION, the son of Xuthus, afterwards built a temple in Asia, to Apollo Panionius, of this order ; and, to render it more agreeable to the eye, he gave six diameters to the column, being guided therein by the example of nature, which has given to the height of man six times the length of his foot.”

MODERN practice allows eight diameters, and a base, which was never given to the Doric order by the ancients : this
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is another mark of its antiquity ; for certainly the base is no less proper than elegant.

CONCERNING the flutings, whether they were at first practised or not, is impossible to determine: the remains of this order of the oldest date are fluted. I am inclined to think, when any thing like ornament was wished to be added, the fluting of columns early presented itself. The original columns having been trees, it was the natural effect of a hot climate on their bark to make it crack or divide, which I think would readily give the hint of flutings.

THE Triglyph, a characteristic mark of this order, has more the appearance of art ; yet I think, the ends of projecting rafters might produce this effect, or near enough, to be improved into what we at present see them ; the places assigned them also corroborate this idea. The ornaments on the metope, or the space between the triglyphs, may have been originally trophies of the Deity, or

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implements of sacrifice placed there : the bull's skull is peculiar to the Doric order.

The profile here given is from the theatre of Marcellus, which has ever been considered as of just proportion for this masculine order : the measurements are according to MONSIEUR DESGODETZ. The denteles in the cornice belong not so properly to this order as to the Ionic : I have taken the liberty to alter the slope of the corona, which in the original is declining, as it is not generally so practised, having a very heavy effect. It was certainly executed there, on account of some optical reason unknown to us. The column has eight diameters, which is now the general practice : is without a base, but the attic base, or its peculiar one may be used. This example is not fluted ; but the base to this order (Plate VII.) shews the manner of a Doric fluted column, which differs from every other, being very shallow, and without any space or fillet between the flutings, which are generally twenty, sometimes twenty-four. There
are

are examples among the antiques of the column being squared off, or wrought with pans, as they are called, instead of hollows. Of this kind is the temple of Minerva at Syracuse, of very ancient Doric: the pillars are cut in pans or angles, and are without bases. The temple of Diana at the same place is also in the same style of Doric.

THE modern proportions from the before cited author, are as follow :

“ THE height of the column, including its capital and base, is sixteen modules: the height of the entablature, four modules; which being divided into eight parts, two are for the architrave, three for the frieze, and three for the cornice: the base is one module in height; the capital thirty-two minutes or a little more.”

THE IONIC order has the following account of its origin by VITRUVIUS.

“ ION (the same as before mentioned) building a temple to Diana, and seeking some new manner, to render it more ele-

gant, had recourse, as before in the Doric order, to the human figure; and gave to this new order a feminine delicacy: thus he was the first who gave eight diameters to a column, that the aspect might be more pleasing; and that its appearance might be more lofty, he added a base, in imitation of a shoe: the volutes, like locks or plaits of hair, hanging on each side, he gave to the capital, ornamented with fruits, or flowers in festoons, and furrows, or flutings down the column were wrought, resembling the folds or plaits of a matron's garment."—"Thus he invented two kinds of columns, in the Doric imitating a manly robust appearance, without ornament; in the Ionic, regarding a female delicacy, accompanied with ornaments pleasing and elegant."—"Succeeding architects much approving the taste and ingenuity of this design, allowed eight diameters and a half to this order."

THIS account of VITRUVIUS points out in what manner another column or
order

order of architecture was introduced, an invention which has justly been celebrated and followed, on account of the beauty and elegance of its parts. Many temples, and other structures, have been built of this order in various parts of Greece and Italy.

VITRUVIUS records an anecdote much in praise of the Ionic order, in the following words: "The difficulty attending the proper adjustment of the mutules, metopes, and triglyphs in Doric structures, was such, as frequently to be a cause of much inconvenience and trouble to architects in large buildings, and also rendered their aspect confused and embarrassing; on which account, and the massy appearance of the Doric column, it was thought improper for sacred buildings: of this opinion were Tarchenius and Pytheus, with many ancient architects; also the celebrated Hermogenes, who, when he was building the temple of Bacchus at Teos, rejected the Doric, though all the

marbles were ready cut, and in its stead erected a temple of the Ionic order."

FROM the remains of this very celebrated building the example of this order here shewn is taken: the grandeur of its appearance will, I flatter myself, justify the choice: it is here given as restored in that elegant work the "Ionian Antiquities."

THE volute of the capital is now often executed on an angular plan, the same as in the Composite order; so that, viewed every way, it has the same appearance: this differs from the regular antiques; and, possessing several advantages, is sometimes to be preferred.

THE standard of the modern proportions is as follows:

"THE height of the column is eighteen modules; and that of the entablature four modules and a half, or one quarter the height of the column, as in the other orders, which is a trifle less than in the regular antique Ionics: the capital is twenty-one

one minutes ; and the base thirty minutes in height : the shaft of the column may be plain, or fluted, with twenty, or twenty-four flutings, whose plan may be a trifle more than a semicircle, because they then appear more distinct ; and the fillet or interval between them must not be broader than one third of the breadth of the fluting, nor narrower than one quarter thereof ; the ornaments of the capital are to correspond with the flutings of the shaft ; and there must be an oval above the middle of each fluting. The entablature being divided into ten equal parts, three are for the architrave ; three for the frieze ; and four for the cornice. In interior decorations, where much delicacy is required, the height of the entablature may be reduced to one fifth of the height of the column.

THE CORINTHIAN order, in the opinion of VITRUVIUS, “ differs from the Ionic only in its capital ; the Ionic capital having no more than one third of the diameter of

the column for its height ; but the Corinthian capital is allowed one entire diameter, which gives to the column a noble, but delicate grandeur. The other members placed on the Corinthian pillar, are common to the Doric and Ionic orders ; for it has no particular species of ornament peculiar to its cornice : sometimes it has the Doric mutules and triglyphs in the architrave ; sometimes an Ionic frieze, with denteles in the cornice ; in a manner, it is no more than a third order, risen out of the former two, which has nothing peculiar to itself, but the capital." The origin of which he thus records :

" A MARRIAGEABLE young lady of Corinth fell ill, and died ; after the interment, her nurse collected together fundry ornaments with which she used to be pleased ; and putting them into a basket, placed it near her tomb ; and, lest they should be injured by the weather, she covered the basket with a tile. It happened the basket was placed on a root of acanthus, which

which in spring shot forth its leaves; these running up the side of the basket, naturally formed a kind of volute, in the turn given by the tile to the leaves."—"Happily *Callimachus*, a most ingenious sculptor, passing that way, was struck with the beauty, elegance, and novelty of the basket surrounded by the acanthus leaves; and, according to this idea or example, he afterwards made columns for the Corinthians, ordaining the proportions such, as constitute the Corinthian order."

VITRUVIUS, in the foregoing account, forgot the peculiarities of the Corinthian cornice, or, the entablature to that order was not then practised in the manner we find remaining among ancient buildings; for to this cornice, the modillion is ever an attendant.

THE beauty and elegance of this order have rendered it famous, and the many examples existing among the fragments of antiquity, sufficiently evince the great esteem with which it was regarded.

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THE ravages of cruel and desolating war have not left us one remain of this order, of the many celebrated examples which the city of Corinth possessed, where arts of every kind, and particularly architecture, eminently flourished and were carried to their perfection. In later times, the conduct of Lucius Mummius, in the destruction of that polished people and city, would have justly been considered as the grossest barbarism: the temples, the sacred buildings were destroyed, and levelled with the ground; so that by one stroke the works of ages were desolated, the labours and ingenuity of thousands destroyed, and posterity deprived of every trace of this order, in the place of its nativity and nurture.— Although Rome would not suffer Corinth as a rival city, there is little doubt she deigned to follow the rules and laws of art established by her vanquished enemy, especially in architecture. The elegance and purity of style in many of her

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buildings

buildings clearly evince Grecian ingenuity and art.

THE profile here given, is according to PALLADIO's measurements of the Corinthian pillars to the portico of the Rotunda at Rome: the universal celebrity of this structure, pointed it out as a proper example.

THE moderns have adapted the following proportions: " The column is twenty modules in height; the entablature five modules; the base one module, and may be either Attic or Corinthian: the capital has seventy minutes in height; the proportion of the members of the entablature, is the same as in the Tuscan and Ionic orders. If the entablature is enriched, the shaft of the column may be fluted, and the flutings may be filled to one third part of their height with cabling, which will strengthen the lower part of the column, and make it less liable to injury. In very rich interior decorations, the cabling may be composed of reeds, ribbands,

ribbands, husks, flowers, &c. The capital is enriched with olive leaves, as almost all the antiques at Rome of this order are; the acanthus is seldom employed but in the Composite order: the entablature to this order may be reduced to two ninths, or one fifth of the height of the column; in which case it is best to use the Ionic entablature, or reduce the denteles of the cornice."

THE COMPOSITE or *Roman* order certainly owes its origin to that constant solicitude after novelty, which ever renders the mind of man restless in enlightened and highly cultivated ages. The desire of variety and novelty, either of new invention, or combination, certainly engaged the Roman architects to unite with the proportions of the Corinthian order, the ornaments of the Ionic, and by this union to compose a new order. This order has been handled very severely by some critics, whose palates are pleased with nothing, which does not relish strong

strong of the rust of high antiquity : these have endeavoured to draw on it a stigma and discredit, it by no means deserves.—

THE introduction of the modern Ionic volute, and the omission of the upper row of leaves in the capital, certainly give it a more bold and animating aspect, than that of the Corinthian capital, yet different from any of the other orders, possessing an elegance and projection very pleasing, and may be used with very agreeable and happy effects.—There are many examples remaining at Rome, which shew the general estimation of this order there, in the height of its splendour and prosperity. In their triumphal arches, it was used with good effect, where it produced an agreeable boldness, joined to elegance and ornament.

THE example here given is, as it is executed in the triumphal arch, erected to the honour of Vespasian and Titus at Rome ; the justness of the proportions,
with

with the elegance of the ornaments, mark it as a proper standard for the Composite order.

THE proportions of the moderns are as follow: "The height of the column is twenty modules; and that of the entablature five modules; the capital has seventy minutes in height; the base measures the same as in the Doric and Ionic orders; and as the module is less, all its parts will of course be more delicate: the shaft may be enriched with flutings, to the number of twenty or twenty-four, as in the Ionic order; there is no reason why they should be augmented. The principal members of the entablature may have the same proportions as the two former orders, *viz.* being divided into ten equal parts, three are for the height of the architrave, three for the frize, and four for the cornice."

HAVING thus given the particulars relative to each order, I shall conclude this part with some general observations,
necessary

necessary to be known and observed, in delineating or making designs in architecture ; these I have extracted from the work before quoted, and have given them in the author's own words, as alteration is needless, and liable to mislead.

AN order may be divided into two parts, the column, including the plinth of its base, with the abacus of the capital ; and the entablature, which includes all above the capital, and may be divided in the large, into the architrave, the frize, and the cornice.

“ By examining the antiques, it will be found, that, in all their profiles, the cyma and the cavetto are constantly used as finishings, and never applied where strength is required ; that the ovolo and talon are always employed as supporters to the essential members of the composition, such as the modillions, denteles, and corona ; that the chief use of the torus and astragal, is to fortify the tops and bottoms of columns,
and

and sometimes pedestals, where they are frequently cut in the form of ropes; and that the scotia is employed only to separate the members of bases, for which purpose the fillet is also used, not only in bases, but in all kinds of profiles.

“ AN assemblage of essential parts and mouldings, is termed a profile; on the choice, disposition, and proportion of these, depends the beauty or deformity of the profile. The most perfect are, such as are composed of few mouldings, varied both in form and size, fitly applied with regard to their uses, and so disposed, that the straight and curved ones succeed each other alternately. In every profile there should be a predominant member, to which all the others ought to be subservient, and seem made either to support, to fortify, or to shelter it from the injury of the weather, as in a cornice where the corona is principal, the cyma or cavetto cover it, and the modillions, denteles, ovolo, and talon support it.

“ When

“ WHEN ornaments are employed to adorn the mouldings, some of them should be left plain, in order to form a proper repose ; for, when all are enriched, the figure of the profile is lost. In a cornice the corona should not be ornamented, nor the modillion band ; neither should the different facias of architraves, the plinths of columns, fillets, nor scarce any square member be carved ; for they are, generally speaking, either principal in the composition, or used as boundaries to other parts ; in either of which cases, their figures should be distinct and unembarrassed. The dentele band should remain uncut, where the ovolo and talon immediately above and below it are enriched ; for, when the denteles are marked, particularly if they be small, the three members are confounded together, and, being covered with ornament, are much too rich for the rest of the composition ; a fault carefully to be avoided, as the just and equal distribution of enrichments is

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on

on all occasions to be attended to.—For, in effect, the ornaments of sculpture in architecture, are like diamonds in a lady's dress, with which it would be absurd to cover her face, and other parts that are in themselves beautiful."

"WHEN mouldings of the same form and size are employed in one profile, they should be enriched with the same kind of ornaments.—It must be observed, that all the ornaments of mouldings are to be regularly disposed, and answering perpendicularly above each other; the middles of the modillions, denteles, oves, and other ornaments, all in a line; for nothing is more confused and unseemly, than to distribute them without any kind of order. The larger parts are to regulate the smaller; all the ornaments in the entablature are to be governed by the modillions; and these are to be dependent upon the intervals of the columns, and so disposed, that one of them may correspond with the axis of each column.

It is farther to be observed, that the ornaments must partake of the character of the order which they enrich ; and those used in the Doric and Ionic orders must be of a simpler kind, and grosser make, than those employed in the Composite and Corinthian."

" IN the exterior, whatever does not contribute to the general effect of the whole building, is in a great measure useless, and an expence that might more judiciously be employed in places where it could be more attended to.—The parts that are in themselves large, and so formed and disposed as to receive broad masses and strong impressions of light and shade, will of course excite great ideas ; but if they are broken into a number of small divisions, and their surface so varied as to catch a thousand impressions of light, demi-tint, and darkness, the whole will be confused, trifling, and incapable of causing any great emotions."

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THUS far Sir W. CHAMBERS. An observation or two more, and I finish the subject.

FIRST, The appearance of columns is often varied by adding rusticated cinctures at equal (or other) distances to a column : this is a modern invention, gives a very unnatural appearance, and disguises the true figure of the pillar. Rustic work is with greater propriety, and better effect, introduced into large entrances, parks and gardens; also into grottos, baths, or fountains, where an irregular and rough appearance better suits the place and purpose.

THE rule for the diminution of columns has ever varied : the ancients frequently diminished the column from the very foot, or from one quarter or one third of its height : the latter method is now generally practised : the diminution should be seldom less than one eighth part of the lower diameter of the shaft, nor more than one sixth : this latter is
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the more graceful: some, by way of giving a better contour or appearance, allow a small swell, or bellying, in the lower part of the middle division of the pillar.

IT may not be altogether useless to give the general rules to be observed in *pedestals*, where it is necessary to introduce them. A determinate rule cannot be given, as they must vary in height according to the circumstances which render them useful: they have ever been considered as mere auxiliaries, to give height, and elevate the column above surrounding objects which impede its view. When they are used by choice, it is common to give them one third, or one quarter part of the height of the column and entablature, which is thus divided: of nine equal parts, two are for the base, one for the cornice, the remaining six for the die of the pedestal, which is equal in size to the plinth of the column:

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the enrichments should be regulated by those of the entablature, &c.

EACH column has its particular *base*. The Tuscan base is the most simple, having only a torus and plinth. The Doric base has an astragal more than the Tuscan. To the Ionic base the torus is larger on a double scotia, with two astragals between. The Corinthian base has two torus's, two scotias, and two astragals. The Composite base has one astragal less than the Corinthian. The Attic base consists of two torus's and a scotia, and is applicable to every order except the Tuscan, which has its particular base. Plate 7.

RUDIMENTS

R U D I M E N T S

OF

ANCIENT ARCHITECTURE.

PART THE SECOND.

OF THE TEMPLES OR SACRED BUILDINGS OF THE ANCIENTS.

I HOPE to be pardoned in requesting the reader's attention to an observation or two, before we enter on the rules of VITRUVIUS concerning sacred buildings.

OF all the buildings of the ancients, those sacred to their Deities remain most perfect, and in the greatest number. Indeed, considering the polytheism of their religion, and how much men and nations

vied in endeavouring to shew the greatest liberality in erecting buildings to the honour of their tutelar deities, or when they had vowed worship and homage to any particular one; I say, when we consider what variety of opportunities offered to shew honour, to exhibit splendour, and to display liberality, we need not wonder at the great number of sacred edifices still remaining: indeed they are so many, and of such magnificence, as chiefly to absorb the traveller's attention, the remains of other public structures being but few. I have therefore given no more on public edifices, than what VITRUVIUS has written of sacred ones, and the rules given by him for the disposition of columns.

OF TEMPLES.

THE following account of their origin and progress will, I think, be considered as rational; for doubtless they had
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their states of progression, as well as every other human invention.

NATURE has implanted in the mind of man so strong an idea of a superiour power, that every nation has some worship or ceremonies, by which they shew their dependance on, and reverence of, a Deity, whose purity of nature requires distinct places for religious services, attended by every mark of awe and respect, best suited to express their ideas of reverence and submission to Omnipotent Power.

As mankind in the rudest state ever acknowledged Powers Divine, the places best calculated to inspire religious ideas were groves, or thick woody places, where gloomy dulness and shade naturally impress the mind with awe, and lead it to contemplation. Such, we may therefore suppose, were the places first set apart for religious worship; but when the weather, or inclination, rendered an enclosed place desirable, they laboured, in this early state of arts, to produce a
building

building merely suited to the necessary purposes. But when society was more enlarged and refined, and the profits of commerce accumulated to wealth, then the mind of man, which naturally runs toward excellence, was not content with the plain and simple structures already built: and, it is likely no small spur was also used by the influence of those concerned in the worship and sacrifices of the times; for additional wealth naturally excited an increase of splendour and more costly ceremonies: these required more room, and a corresponding increase of state and magnificence, that the several rites, &c. might be suitably performed: thus, an edifice of more elegance, a building of greater extent and richer embellishments was required, which would shew superiour honour and respect to the Deity worshipped.

THUS, from the simplest structure, rose the Antis, Prostyle, &c. till invention and ingenuity, aided by unbounded liberality,

berality, crowned the whole with the hypæthral edifice. Excited by ambition, and enabled by vast riches, whose sources were far extended territory and numerous fertile provinces, emperors, and even private persons, were enabled to erect the most costly temples, the extent and magnificence of which are truly astonishing.

It is a remark worthy notice, that the ancient architects did not follow in a servile manner the rules delivered by Vitruvius: yet certainly what he wrote, were the rules by which they planned their great outline, or design; however they might vary the smaller or inferior parts of an edifice. To enumerate a few instances of variation:

THE Temple of Minerva at Athens has eight columns in front; and Vitruvius allows but six to a peripteral, of which order this building is.

THE Temple of Minerva Pollias has six columns in front, yet is prostyle; although

although Vitruvius allows but four to this order.

THE Temple of Jupiter Olympus at Athens has no more than eight columns in front, yet is hypæthral, to which Vitruvius gives ten columns in front. This is a variation recorded by himself, and without any particular notice of the violation of the rule; from which it should appear as not considered of much consequence.

THE walls of the cell were always placed opposite the columns of the pronaos, and posticum, according to the rule; at least I recollect but one example to the contrary, which is in the Temple of Theseus at Athens.—I thought it necessary to notice these instances of the variation of the ancient architects, that the researches and genius of modern times might not be led into error, or fettered by observing as law, that which was not adhered to by those we wish to imitate.

VITRUVIUS

VITRUVIUS

ON

SACRED BUILDINGS.

“SACRED Buildings, or Temples, differ in their various figures and aspects. Of the first order is the *Antis*. 2dly, The *Prostyle*. 3dly, The *Amphiprostyle*. 4thly, The *Peripteral*. 5thly, The *Pseudodipteral*. 6thly, The *Dipteral*. 7thly, The *Hypæthral*, which are distinguished in this manner.

THE edifice or temple is called *Antia*, when it has in the front antæ, or pilasters, at the corners of the wall which forms the cell; and between the pilasters in the middle, two columns, which support the pediment or porch; of which examples are

at

at the three Temples of Fortune, the one nearest the Colline Gate.

2dly, THE *Prostyle* is the same as the *Antis*, only columns are placed opposite the pilasters of each corner, which support a chapiter or architrave, the same as in the *Antis*: an example of this manner is the Temple of Jupiter and Faunus, in the Isle of Tyber.

3dly, THE *Amphiprostyle* is the same as the preceding, only a postern or back front (*Posticum*) is added, with columns and pediment, the same as to the *Prostyle*.

4thly, THE *Peripteral* has in the front and hinder porch (*Posticum*) six columns, and eleven, counting the corner ones, on each side. And these columns are so placed, that the space of an intercolumniation shall be left between the wall and the outer range of columns, leaving an ambulatory round the cell of the edifice: as in the Gate of Metellus, the Temple of Jupiter Stator designed by Hermodius; and that founded by Mariana to Honour
and

and Virtue, built by Mutius, and wants the hinder porch.

5thly, To the *Pseudodipteral*, the columns are so placed, that in the front and behind there are eight columns, and on each side, counting the corner ones, fifteen; and the walls of the cell must correspond, or run parallel with the four centre columns, both before and behind: there must be the space of two intercolumniations, and the thickness of one column between the walls and the outer columns. Of this order Rome affords no example; but at Magnesia, the Temple of Diana, by Hermogines Alabandin; and that of Apollo, built by Amnesta, are examples.

6thly, THE *Dipteral* is octostyle or eight-columned, both before and behind; but it has a double row of columns round the cell, as in the Temple of Jupiter Quirinus of the Doric order, and the Ionic Temple of Diana at Ephesus, built by Ctesiphon.

7thly, THE *Hypæthral* is decastyle or ten-

ten-columned, both before and behind : the other parts are the same as the *Dipteral*, but within it has a double row of columns, one above the other all round, resembling a porch, which is called a *Peristyle*: the middle has no roof; it has folding-doors both before and behind. We have no example of this at Rome; but Athens has one, the Temple of Jupiter Olympus, which is *octostyle* or eight-columned.

THERE are also round temples, of which some are *Monopteral*, without cells, and built on columns: the other is called *Peripteral*. Those without cells have a tribunal or throne, and are ascended by steps of one third of the diameter of the temple: the columns, placed on pedestals, are as high as the diameter of the temple, taken at the outer side of the pedestals; their thickness is one tenth part of the height of the shaft and capital: the height of the architrave is half the diameter of the column: the frieze, and other ornaments

ments above, may be according to the general rule.

THE *Peripteral* is built with an ascent of two steps, on which the pedestals of the columns are placed: the wall of the cell is distant one fifth part of the diameter of the temple from the pedestals of the columns: in the middle is left a space for folding doors: the diameter of the inner part of the cell must be equal to the height of a column without the pedestal; the columns round the cell are placed with suitable proportion and symmetry. The enclosure in the middle is thus proportioned: one diameter of the whole building for its height; half is for the cupola, exclusive of a flower on the top of the pyramid: the size of the flower shall be the same as a capital of the columns; the other parts may be according to the proportions already written.

By the same general proportions other kind of temples are built, but have different dispositions of their parts; as the tem-

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ple of Castor in the Circus of Flaminius: and the temple of Vejovius between the two groves; also the temple of Diana of the Groves; where the columns are added on both sides the walls of the porch. This kind of building, as in the temple of Castor in the Circus, was first used in the temple of Minerva within the citadel at Athens, and in the temple of Pallas at Sunium in Attica. They have the same proportions as the others; for the cell is in length double its breadth; and the same rule is followed for the sides as for the fronts.

SOME there are who use the Tuscan disposition of the columns, although they are of the Corinthian or Ionic orders.

To temples, whose walls with the antæ project to form a porch, two columns are placed opposite the walls which form the cell; thus blending the Tuscan and Greek manners.

AGAIN, others by removing the walls of the cell, and placing them between
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the intercolumniation, leave a very large space within the cell; the other parts preserve the same proportion and symmetry. Thus has arisen a new order, which is called *Pseudodipteral*; and this kind is particularly useful for sacrifices. The same kind of temple cannot be made to every god, because of the diversity of the ceremonies to be performed.

Thus I have explained, as far as I was able, every kind of sacred building—their order—the symmetry of their parts—the difference of their figure; and what variety is to be observed in them, I have been careful in writing.”

THE elegance and magnificence of a structure depending very much on the proper placing of the columns; and as it appears connected with the subject here treated of, I add the rules laid down by VITRUVIUS, observed by the ancients, and allowed by the moderns, in the disposition of columns, called by that writer

THE FIVE SPECIES OF BUILDING.

“OF buildings there are five sorts or species ; which are called, 1st, The *Pycnostyle*, that is, thick of columns. 2d, The *Systyle*, that are a little wider. 3d, The *Diastyle*, still wider. 4th, The *Aræostyle*, more distant than is proper. 5th, The *Eustyle*, which is the proper distance.

To the *Pycnostyle*, the distance of the intercolumniation is one diameter and a half of the column ; as in the temple of the divine Julius ; the temple of Venus in Cæsar’s Forum ; and many others after the same manner.

THE *Systyle* has two diameters of the column between the intercolumniation, and the plinths of the base are equal to the space which is between two plinths ; as in the temple of Fortuna Equestris, near the Stone Theatre, and others made
after

after the same proportions. Both these sorts are inconvenient; for the ladies, when entering the temple to worship, cannot pass the columns arm in arm unless they go side-ways: also, by the frequency of the columns, the view of the door, and the signs or trophies of the deity, are hid, and the narrowness of the porch is inconvenient for walking.

THE *Dyastyle* has this distribution, viz. three diameters of the columns between the intercolumniations, as in the temple of Apollo and Diana. This has its inconveniencies; because the architrave, on account of the distance between the column, is liable to break.

IN the *Aræostyle* they use neither stone nor marble, but make the beams of durable timber. This kind of building is straggling and heavy, low and broad. The pinacles are generally ornamented with fictile or earthen ware, or brass gilt after the Tuscan manner, as is to be seen in the Circus Maximus at the Temple of

Ceres, and in Pompey's Temple of Hercules, and also in the Capitol.

THE *Eustyle* manner is now to be treated of; which, with great justice, for its usefulness, beauty, and durability, merits every commendation. It is formed by allowing to the distance of the intercolumniations two diameters and a quarter, and to the middle intercolumniation only, both before and behind, three diameters. Thus the figure has a beautiful aspect, is accessible without impediment; and round the cell is a stately ambulatory.

THE rule is this:

THE front of the building of it is *Tetrastyle* (four columns), is divided into eleven parts and a half, without reckoning the projection of the base of the column. If it is *Hexastyle* (six columns), it is divided into eighteen parts. If it is *Octastyle* (eight columns), it is divided into twenty-four parts and a half. Of these parts one, whether the building be *tetrastyle*, *hexastyle*, or *octastyle*, shall be a module, which is
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to be the thicknefs of a column. Each intercolumniation, except the middle one, muft be two modules and a quarter ; the middle one fhall have three modules both before and behind : the height of the columns fhall be eight modules and a half : by this divifion of the intercolumniation, the columns have a juft proportion. Rome affords no example of this kind ; but at Teos in Afia is one, the temple of Bacchus, which is octaſtyle.

HERMOGENES was the firft inventor of thefe proportions ; he alfo firft ufed the octaſtylepseudodipteral : he firft contrived to take away, without injuring the beauty, the interior range of columns in the dipteral (which are thirty-four), thereby very much decreasing both the labour and expence : this alfo gave a very large ambulatory round the cell, and, without miſſing the ſuperfluity, preſerved the majeſty of the whole ; for the walls and the columns were firſt thus diſpoſed, that the view, on account of

the asperity (*asperitas*) of the intercolumniation, should have more majesty : besides, it has this convenience, of sheltering a great many persons from rain, as well round as within the cell, which includes a great space. This disposition of pseudodipteral buildings, was first discovered by the labour of the great and discerning spirit of Hermogenes ; which, like a fountain, will serve posterity from whence to draw rules for the Science of Architecture.

THE columns to the *Aræostyle* should have for their thickness one eighth part of their height. For the *Diastyle*, the height of the column is to be divided into eight parts and a half ; one part for the thickness of the column. For the *Systyle*, the height shall be divided into nine parts and a half ; one part for the thickness of the column. Also for the *Pycnostyle*, the height shall be divided into ten parts ; one part for the thickness of the column. The *Eustyle* also is divided
into

into eight parts and a half, the same as the Diastyle: one part is given for the thickness of the column; and for the solidity of its parts it shall have its proper intercolumniation. As the space between the columns increases, so ought also the thickness of the columns. If it is aræostyle, and they should have only a ninth or tenth part for their thickness, they will then appear tall and slender, on account of the length of the intervals; for the air will in appearance diminish the thickness of the columns. On the contrary, if it is pycnostyle, and the columns have an eighth part for their thickness, they have a clumsy and ungraceful appearance, on account of the frequency of the columns, and the narrowness of the intervals: for this reason, the symmetry and proportion of each order should be attended to. Also the thickness of the corner columns must be increased one fiftieth part; for, by the great surrounding space, they will appear smaller to the
view,

view, and it is necessary art should rectify this defect of vision.

FOR the diminution of the shaft of a column, the following rule may be observed: if the shaft of a column is fifteen feet high, the diameter of the lower part is divided into six parts; five of which are for the top diameter. If columns are from fifteen to twenty feet high, the lower diameter is divided into six parts and a half; five and a half of which are for the top diameter. If columns are from twenty to thirty feet high, the lower diameter is divided into seven parts; six of which are for the top diameter. If columns are from thirty to forty feet high, the lower diameter is divided into seven parts and a half; six and a half of which are for the top diameter. If columns are from forty to fifty feet high, the lower diameter is divided into eight parts; seven of which are for the top diameter. If any are higher than those mentioned,

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they

they shall have the same proportions for their diminution.—An additional thickness is properly given, on account of the increased height ; for, as the eye is attracted by beauty, it is necessary it should be flattered by the pleasure it receives from proportionate and just distribution of parts, as it is when deceived by judicious additions ; else the whole will have a bulky and inelegant effect.”

A

DICTIONARY OF TERMS

USED IN

ARCHITECTURE.

DICTIONARY.

A.

ABACUS, the upper member of a column, which serves as a covering to the capital; to the Tuscan, Doric and Ionic, is square; to the modern Ionic, Corinthian and Composite, each side is arched or cut inwards, and is decorated in the centre with a flower or other ornament. See plates 9, 10.

ACANTHUS, a plant, whose leaves form an ornament in the Corinthian and Composite capitals, and are said to have originally given rise to the former order.

ACROTERIA, a kind of base, placed on the angles of pediments, usually for the support of statues, &c.

AMPHIPROSTYLE, *i. e.* double prostyle, or having pillars on both fronts; according to Vitruvius, the third order of temples. See page 46.

AMPHI-

AMPHITHEATRE, a place for exhibiting shows, very spacious, of a round or oval figure, with many seats rising on every side.

ANNULET, a small square moulding, which serves to crown or accompany a larger, and to separate the flutings in columns. See plate 8.

ANTÆ, a species of pilasters on the extremity of a wall, usually have no diminution, nor do the mouldings of their capitals or bases always resemble those of the columns.

ANTÆ or *Antis*, i. e. pilasteral; according to Vitruvius, the first order of temples. See page 45.

APOPHYGE, that part of a column where it begins to rise upwards out of its base.

AQUÆDUCT, an artificial canal, built for the conveyance of water from one place to another, either running under ground, or rising above it.

ARCH, part of a circle or ellipsis.

ARÆOSTYLE, according to Vitruvius, the fourth method or species of intercolumniation,

niation, to which four diameters are allowed between each column. See page 53.

ARCHITRAVE, the lowest principal member of an entablature, lying immediately upon the abacus of the capital. See plates 9, 10.

ASTRAGAL, a small round member resembling a ring, which terminates the extremities of the column; is sometimes used to divide the fascia of the architrave, when it is frequently cut into beads, &c. See plate 8.

ATTIC BASE. See *Base*. See plate 7.

B.

BALUSTER, small columns, or pillars of wood, stone, &c. used on terraces or tops of buildings for ornament, and to support railing, and when continued form a *balustrade*.

BAND, a general term for a low, flat, or square member.

BASE, the lower and projecting part of a column and pedestal. See page 38. See plates 7, 10.

BASILIC, a royal palace; among the ancients was a great hall, with a portico, isles, tribunal, &c. where the king in person distributed justice; it is also applied to

F

modern

modern churches when spacious and elegant.

BOSSAGE, a term used for any stone laid with a projection beyond the upright of a building, to be afterwards cut into mouldings or other ornaments ; it is also used for rustic work, because the rustics project over the perpendicular of the building.

BUTMENT, supporters or props, on or against which the feet of arches rest.

BUTTRESS, a kind of butment, built sometimes archwise, as to Gothic buildings ; a mass of stone or brick work, serving to prop or support buildings, walls, &c. on the outside, where their great height or weight require additional strength.

C.

CALIDUCTS, pipes or canals, disposed in or along the walls of houses, for conveying hot air to distant apartments, from a common or central furnace, as practised by the ancients.—This method has been adapted in modern buildings with good success and œconomy.

CAPITAL, the uppermost member of a column, which is as a crown or head thereto,

thereto, placed immediately over the *shaft*, and under the *architrave*; no column is complete without a capital, which is a distinguishing mark of each order.— Tuscan and Doric capitals consist of mouldings; Ionic, Corinthian, and Composite capitals, of leaves and other ornaments.

CARTOUCHE, an ornament in sculpture representing a scroll of paper, &c.

CARYATIDES, a kind of order in Architecture, in which a female figure is applied instead of a pillar; the origin of which is thus handed down by Vitruvius. The inhabitants of Caria, a city of Peloponnesus, made a league with the Persians against their own nation; but the Persians being worsted, they were afterwards besieged by the victorious party, their city taken and reduced to ashes, the men put to the sword, and the women carried away captives. To perpetuate the memory of this victory, the conquerors caused public edifices to be erected, in which, as a mark of degradation and servility, the figures of the captives were used instead of columns, thus handing

to posterity their merited servility and punishment. When figures of the male sex are used, they are called *Persians* or *Perses*.

CATADROME, an engine of the ancients, like a crane, used to raise great weights.

CAVETTO, a concave moulding of one quarter of a circle. See plate 8.

CAULICOLI, the little twists or volutes under the flower on the abacus in the Corinthian capital, represent the twisted tops of the acanthus stalks; are called also *Helices*.

CELL, in an ancient temple, is the inclosed space within the walls.

CINCTURE, a ring, list, or fillet, at the top and bottom of the shaft of the column; that at the bottom is called *Apophyge*; the top one is called *Annulet*, or *Astragal*.

COLLARIN, or *Collarino*, the neck or frieze of a Tuscan or Doric capital.

COLONNADE, a series or continuation of columns.

COLUMN, a round pillar used in Architecture, to adorn or support. Columns are of five kinds; the *Tuscan*, *Doric*, *Ionic*, *Corinthian*, and *Composite*, each of which has

has its particular proportion. The term includes the base and the capital.

COMPOSITE *order*, one of the five orders of Architecture.

CONGE, a small moulding, which serves to separate larger ones, called also *List* or *Annulet*.

CONSOLE, an ornament cut on the key-stone of arches, with a projection, capable of supporting busts, vases, &c.

CONTOUR, the outline of a figure, or piece of Architecture.

COPING *of a wall*, the top or covering made sloping to throw off water.

CORBEILLE, carved work, representing a basket with fruits or flowers, serving as a finish to some other ornament. It sometimes is applied to the vase of the Corinthian capital, the word originally meaning a basket.

CORINTHIAN *order*, one of the five orders of Architecture.

CORNICE, the upper assemblage of members in an entablature, commencing at the frieze; each order has its particular cornice, with suitable enrichments. To the

Tuscan it is quite plain ; to the *Doric* are added *gutta*, or bells in the *soffit* : the *Ionic* has plain modillions ; the *Corinthian* is much enriched, and has modillions ; the *Composite* is not quite so much enriched as the *Corinthian*. See plates 9, 10.

CORONA, a large flat and strong member in a cornice, called also the *Drip*, or *Larmier* ; its use is to screen the under parts of the work, and, from its shape, to prevent the water running down the column ; it has always a large projection to answer its proposed use. The under, or horizontal part of the corona, is called the *Soffit*, and admits of various degrees of ornament, according to the richness of the order.

CORRIDOR, a gallery or passage in large buildings, which leads to distant apartments.

CRYPTO-PORTICUS, a vaulted, subterraneous, or obscure place ; also the decorations at the entrance of a grotto.

CUPOLA, a round roof or dome, in the form of an inverted cup.

CYMA, *Cima*, or *Cymatium*, a species of moulding,

ing, which is generally the upper one to an entablature. There are two sorts of this moulding, the *cyma recta*, and *cyma reversa*. See plate 8.

D.

DECASTYLE, in ancient Architecture, a building, with ten columns in front.

DENTELE, an ornament resembling teeth, used in Ionic and Corinthian cornices.

DIASTYLE, according to Vitruvius, the third species of intercolumniation, having three diameters between the columns.

DIE, the square or naked piece in a pedestal, that part which is between the base and the capital. See plate 10.

DIPTEROS, *i. e.* having a double range of columns; according to the arrangement of Vitruvius, is the sixth order of temples.

DOME, a spherical roof.—See *Cupola*.

DORIC *order*, one of the five orders of Architecture.

DRIP. See *Corona*.

DROPS or *Guttæ*, in the Doric entablature, are small pyramids or cones, immediately under the triglyph.

E.

ECHINUS, is properly the egg and anchor ornament peculiar to the *Ionic* capital ; it is sometimes used for the whole member instead of *ovolo*.

ENCARPUS, used to express festoons of fruits or flowers on frizes, &c. Literally means fruit only.

ENTABLATURE, an ornament or assemblage of parts, supported by a column or pilaster over the capital : each order of columns has a peculiar entablature divided into three principal parts ; the *architrave*, which is divided into two or more *facias*, and rests upon the capital. The *frize* is next, and may be plain or ornamented. The *cornice* is the top or crowning part. See plates 9, 10.

EPISTYLE, the same as architrave.

EUSTYLE, according to Vitruvius, the fifth and most eligible method of intercolumniation, having two diameters and a quarter between the columns.

EXHEDRA, in ancient Architecture, a large recess, where company used to retire for conversation, &c. in some buildings was a distinct apartment.

FAÇADE,

F.

FAÇADE, the front view or elevation of a building.

FACIA, a flat member in the entablature of an order, representing a band or broad fillet in an architrave; if divided, these divisions are called the first facia, the second facia, &c. See plate 9.

FASTIGIUM, the name used by Vitruvius for what we call a *Pediment*.

FILLET. See *Annulet*.

FLUTINGS, the hollows or channels, which are cut perpendicularly in columns by way of ornament.

FOLIAGE, an assemblage of leaves.

FRIZE, the middle member of an entablature, having the architrave below, and the cornice above.

FRONTISPIECE, sometimes signifies the whole face or aspect of a building, but is more properly applied to the decorated entrance of a house.

FUST, the shaft of a column, or that part which is between the base and the capital.

GLYPHS,

G.

GLYPHS, the perpendicular channels cut in the *triglyphs* of the Doric frieze.

GOLA, or *Gula*, a moulding, more usually called *cyma reversa*, or *ogee*.

GORGE, a hollow moulding, a *cavetto*.

GOTHIC, a peculiar style of Architecture, distinct from the Grecian or Roman, derived from the Goths, or rather from the Saracens.

GULA. See *Gola*.

GUTTÆ. See *Drops*.

H.

HELIX, or *Helices*. See *Cauliculi*.

HEXASTYLE, a place having six columns in front.

HIPPODROME, a place where the ancients exercised their horses, also the course for the horse-race.

HOUSE, the houses of the ancients had great and magnificent vestibules or entries, which were sometimes two hundred and twenty feet long, and one hundred and sixty broad, supported with two ranges of pillars, which formed a wing on each side.

The

The Greeks and the Romans differed in the distributing and ordering their apartments. The Romans had magnificent courts and entries, but the Greeks only a narrow entry through which they passed into a peristyle; this entry or passage had on one side the porter's lodge, and on the other the stables. Among the Greeks, the apartments of the women were separate from those of the men, and the latter dined by themselves.

THE ancients had three sorts of *halls* or *vestibules*, viz. the *Corinthian*, which had pillars round against the wall; these supported the ceiling which was vaulted: the second was the *Egyptian* hall; in this the pillars were detached from the wall in the manner of a *peristyle*. The space between the columns and the wall was covered with a pavement, and formed a walk or balcony round. The range of pillars supported an architrave, on which was another range of columns, between which were the windows. The third was the *Cyzican* hall, which was used chiefly by the Greeks, and had this in particular, that they faced
the

the North, and had a prospect of the garden.

HYPÆTHRAL, *i. e.* uncovered, or open to the sky; according to Vitruvius, the seventh order of temples, and without a roof.

HYPOTRACHELION, the neck or frieze of a capital.

I.

IMPOST, a fascia or small cornice which crowns a pier or pilaster, and from which an arch springs.

INSULATED, standing alone, or detached from any contiguous buildings, &c.

INTERCOLUMNIATION, the space between two columns, for the particulars of which, see page 52.

IONIC *order*, one of the five orders of Architecture.

K.

KEY-STONE, the highest stone of an arch, to which a projection is usually given, and sometimes cut in ornaments.

L.

LARMIER. See *Corona*.

LIST, or *Listel*. See *Annulet*.

METOPE,

M.

METOPÉ, the interval or square space between the triglyphs in the Doric frieze.

MEZZANINE, or *Mezzetti*, small or low stories between principal ones, used as servants apartments.

MINUTE, an *architectonic measure*, the lower diameter of a column divided into sixty parts, each part is a *minute*.

MODILLION, an ornament resembling a bracket, in the Ionic, Corinthian, and Composite cornices. See plate 9.

MODULE, an *architectonic measure*, the lower diameter of a column divided into two parts, one is a *module*, each module is divided into thirty *minutes*; thus either is not a determinate, but a proportionate measure.

MONOPTERAL, a round temple without a cell.
See page 48.

MOULDINGS, those parts which project beyond the base or perpendicular face of a wall, column, &c. intended only for ornament, whether round, flat, or curved: the regular mouldings are, 1st, the *list* or *annulet*; 2d, the *astragal* or *bead*; 3d, the *cyma reversa*, or ogee; 4th, the
cyma

cyma recta ; 5th, the *cavetto*, or hollow ; 6th, the *ovolo* or quarter round ; 7th, the *scotia* ; 8th, the *torus*. See plate 8. For general observations on mouldings, their disposition, &c. see page 32.

MUTULE, an ornament in the Doric cornice, answering to a *modillion* in the Ionic and Corinthian entablatures.

N.

NICHE, a cavity or hollow in a wall for statues, &c.

O.

OCTASTYLE, an edifice having eight columns in front.

OGEE, a *cyma reversa*.

ORDER, in Architecture, a column entire, consisting of *base*, *shaft*, and *capital*, with an *entablature*. For a particular account of each *order*, see the beginning of this work.

OVA, or *ovum*. See *Echinus*.

OVOLo, a moulding which projects one quarter of a circle, called also a *quarter round*. See plate 8.

PEDESTAL,

P.

PEDESTAL, a square body on which columns, &c. are placed. See plate 10.

PEDIMENT, a low triangular ornament in the front of buildings, and over doors, windows, &c.

PIER, a kind of pilaster or buttress, to support, strengthen, or ornament; the pier of a bridge, is the foot or support of the arch; the wall between windows or doors. Also square pillars of stone or brick, to which gates to an entrance are hung.

PENTASTYLE, an edifice having five columns in front.

PERIDROME, the space in a *Peripteral* temple, which is between the column and the cell.

PERIPTERAL, *i.e.* having columns all around; according to Vitruvius, the fourth order of temple; also around temples.

PERISTYLE, a range of columns or colonnade, with a court or building like a cloister: the internal colonnade to the *Hypæthral* temple, is a *peristyle*.

PIAZZA, a continued arched way or vaulting, under which to walk, &c.

PILASTER, a square pillar or column, usually placed against a wall; has the same proportions and ornaments as a column.

PILLAR, this word is generally used in Architecture, in common with *column*, though strictly speaking they are different; thus the supporters in Gothic Architecture are pillars, but can never be properly termed columns, varying in shape and every particular from the latter.

PLAT-BAND, any flat square moulding with little projection; the different facias of an architrave are called plat-bands; the same is applied to the list between flutings, &c.

PLINTH, the lower member of a base. See plates 9, 10.

PORCH, an arched way, or covering at the entrance of a great building, particularly to churches.

PORTICO, a continued range of columns covered at top, to shelter from the weather; among the ancients these were highly ornamented, and of great extent. The remains of the portico at Palmyra show it to have been full four thousand feet long.

POSTICUM,

POSTICUM, the porch in the back front of an ancient temple.

PROFILE, the outline or contour of any building, &c.

PROSTYLE, *i. e.* having pillars in front only; according to Vitruvius, the second order of temples.

PRONAOS, the front porch of an ancient temple.

PSEUDO-DIPTERAL, *i. e.* false or imperfect dipteral, the inner range of columns being omitted; according to Vitruvius, the fifth order of temples.

PYCNOSTYLE, according to Vitruvius, the first method of intercolumniation, having one diameter and a half between each column.

PYRAMID, a structure, which, from a square, triangular or other base, rises gradually to a point.

Q.

QUARTER ROUND, a moulding. See *Ovolo*.

QUOINS, stones or other materials put in the angles of buildings to strengthen them.

R.

RELIEVO, signifies the projection of any carved ornament.

G

ROMAN

ROMAN *order*, the same as the *Composite*.

ROTUNDA, a building which is round both within and without.

RUSTIC, the term is applied to those stones in a building which are hatched or picked in holes, resembling a natural rough appearance.

S.

SALOON, a lofty, vaulted, spacious hall or apartment.

SCAPUS, the shaft of a column.

SCIMA. See *cyma*.

SCOTIA, a hollow moulding used in bases to capitals. See plate 8.

SECTION of a building, represents it as if cut perpendicularly from the roof downwards, and serves to shew the internal decorations and distribution.

SHAFT, the trunk or body of a column between the base and the capital.

SOFFIT, the under part or ceiling of a cornice, which is usually ornamented; the under part of the *corona* is called the *Soffit*; the word is also applied to the ceiling of an arch, the under side of an architrave, &c.

STOA,

STOA, a *portico*.

STYLOBATUM, the pedestal of a column.

SYSTYLE, according to Vitruvius, the second method of intercolumniation, having two diameters between the columns.

T.

TAILLOIR, the *abacus*.

TALON, a *cyma reversa*.

TEMPLE, among the ancients, according to Vitruvius, there were seven different kinds or orders, see page 45. The word is applied to buildings used to decorate modern gardens, &c.

TENIA, the upper member of the Doric architrave, a kind of *listel*.

TETRASTYLE, a building with four columns in front.

TONDINO, an *astragal*.

TORUS, or *Tore*, a large semicircular moulding, used in the base of columns. See plate 8.

TRABEATION, the entablature.

TRIGLYPH, an ornament peculiar to the Doric frieze. See plate 10.

TROCHILUS, the *scotia*.

TUSCAN *order*, one of the five orders of Architecture.

TYMPAN, the flat surface or space within a pediment.

V.

VASE, the body of a Corinthian capital, also an ornament used in Architecture, &c.

VAULT, an arched roof, the stones or materials of which are so placed as to support each other.

VESTIBULE, the hall or entrance within large houses.

VOLUTE, the scroll or spiral horn, used in Ionic and Composite capitals.

X.

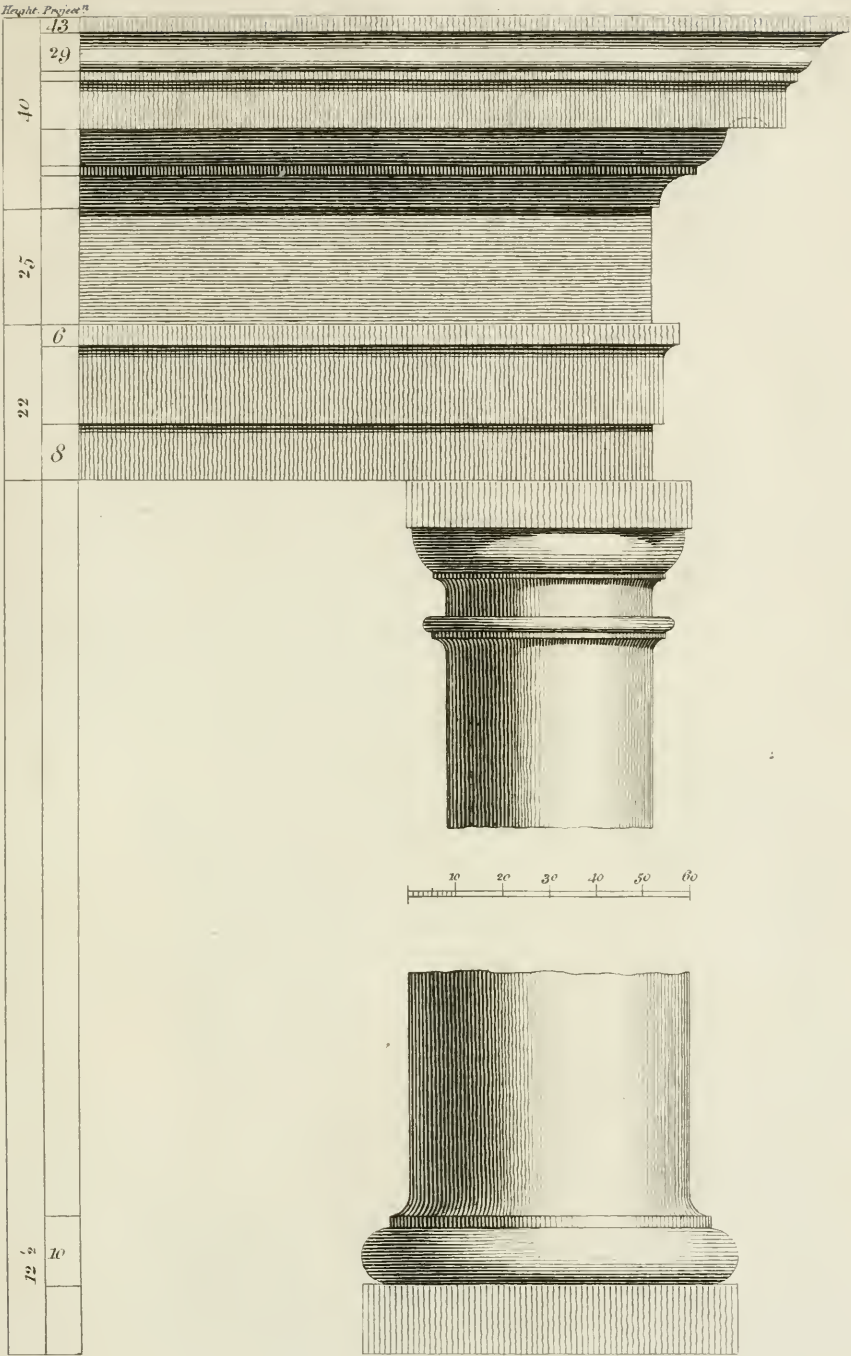
XYST, a large court with a portico on three sides, planted with rows of trees, where the ancients performed athletic exercises—running, wrestling, &c.

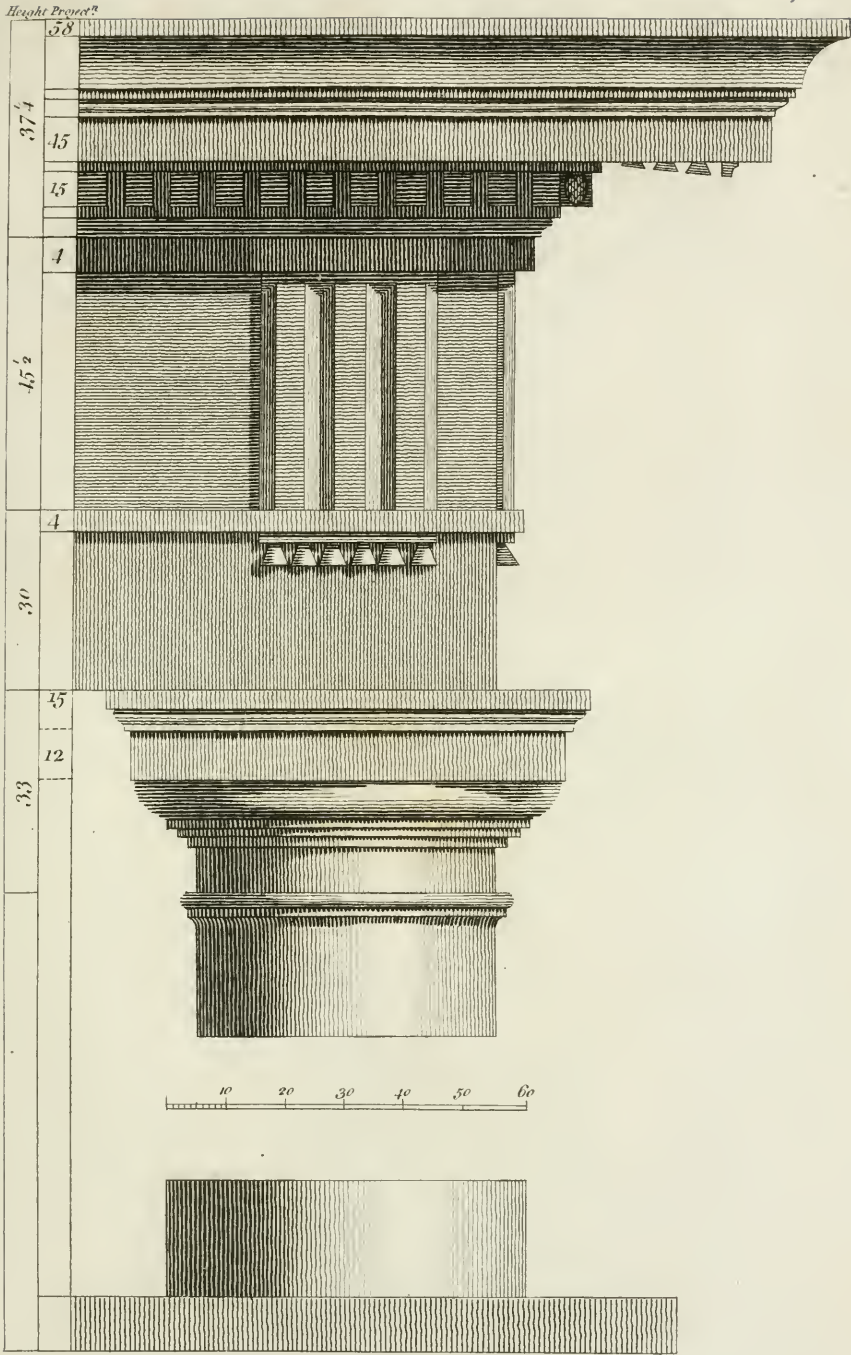
Z.

ZOCLE, or *Zoccolo*, a low square member, which serves to elevate a statue, vase, &c. also when a range of columns is erected on one continued high *plinth*, it is called a *Zocle*; it differs from a pedestal, being without base or cornice.

TUSCAN.

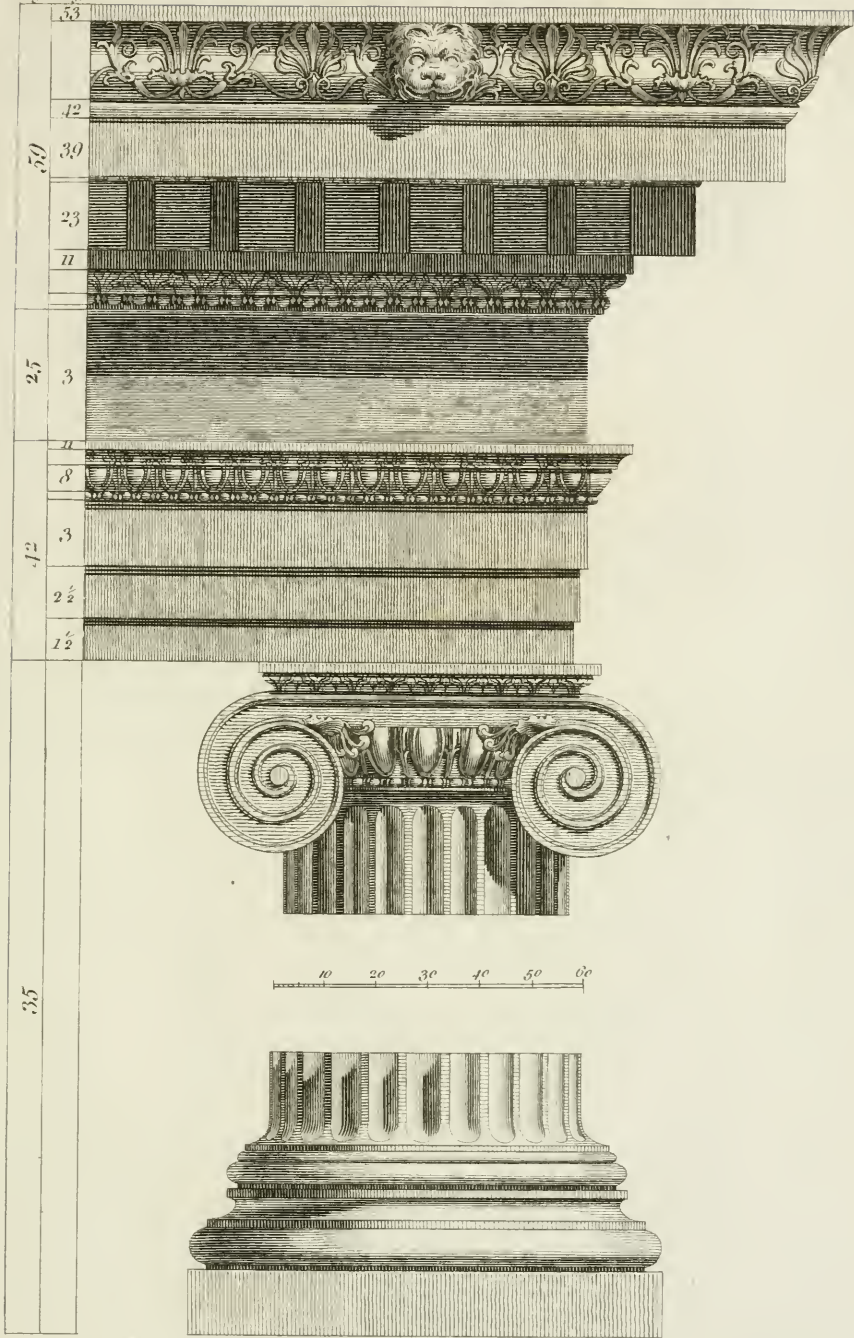
Height Proportions



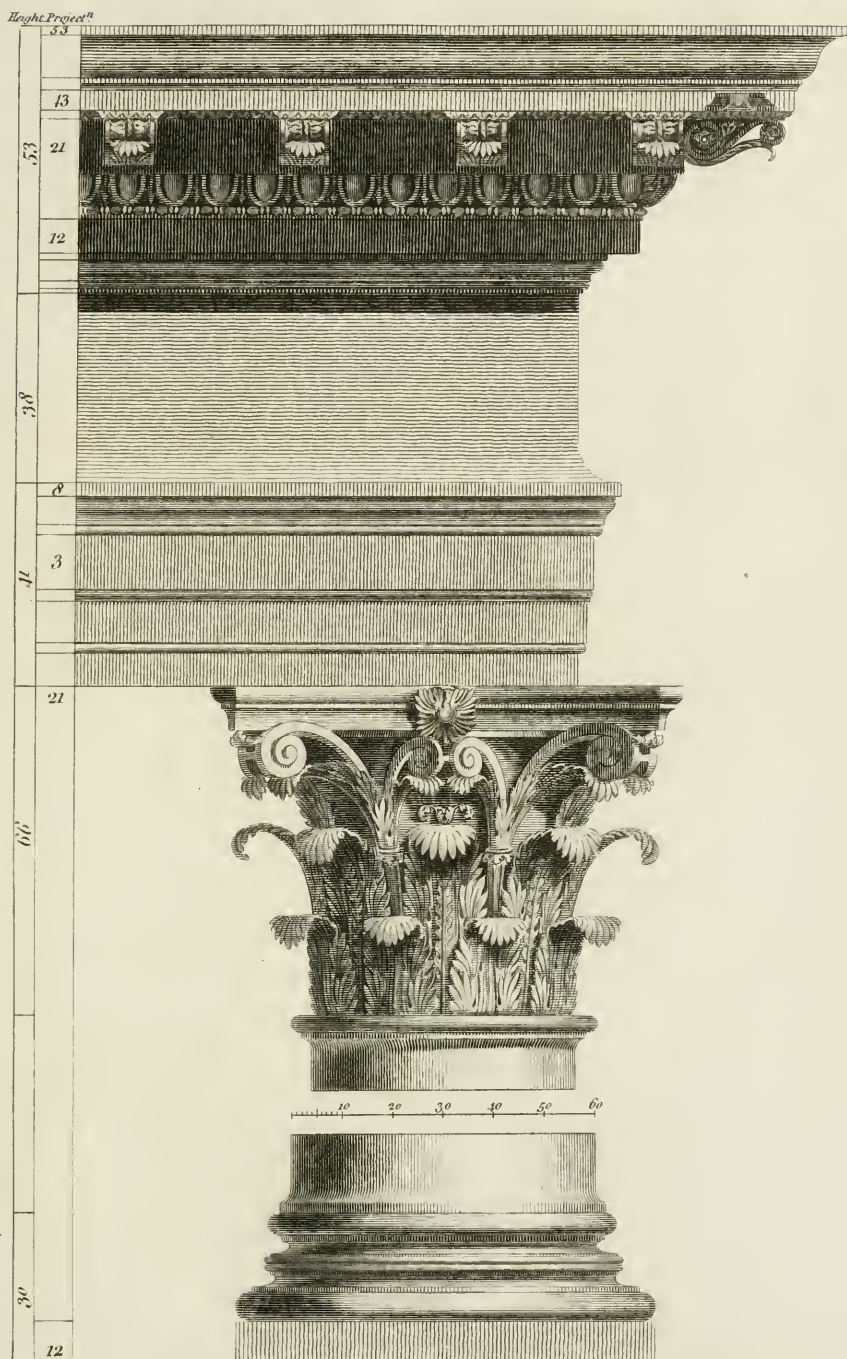


IONIC.

Height, Project?

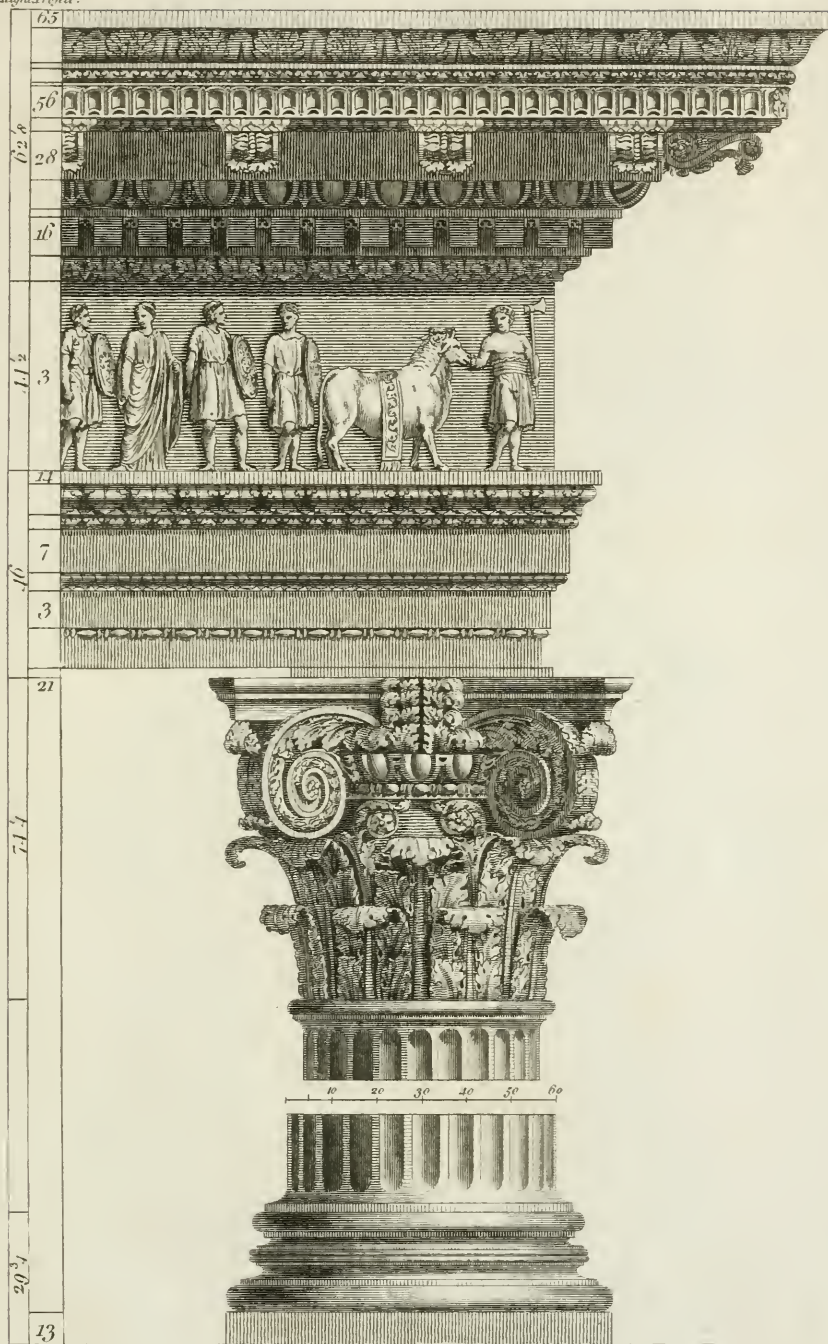


CORINTHIAN.



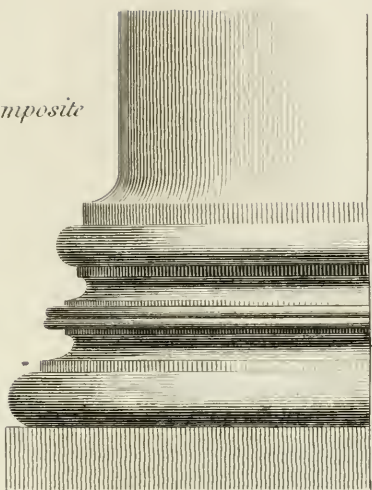
COMPOSITE.

Height, Proportions

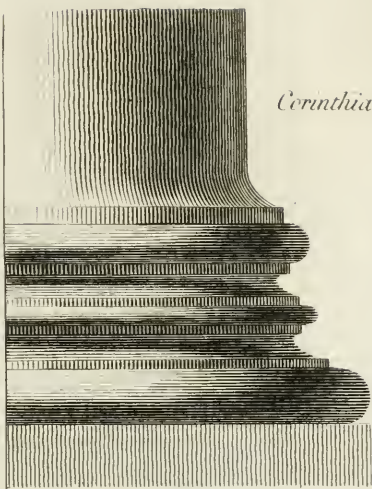


BASES.

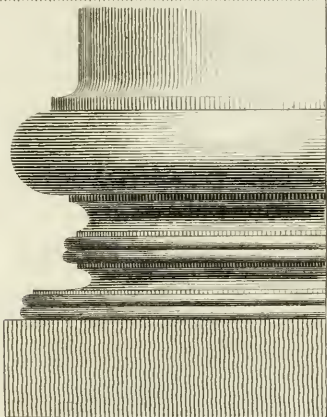
Composite



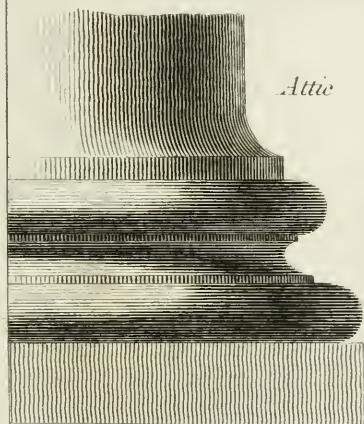
Corinthian



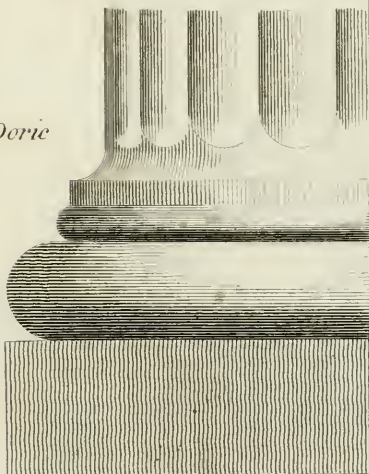
Ionian



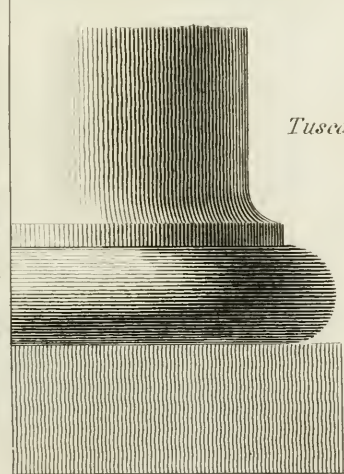
Attic



Doric



Tuscan



MOULDINGS .

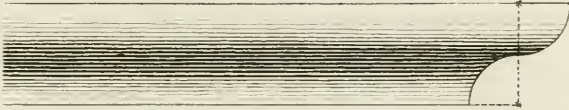
Annulet, List or Square .



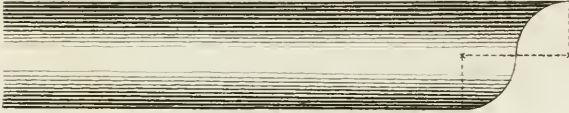
Astragal or Bead .



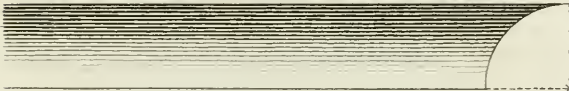
Cima reversa or Ogee .



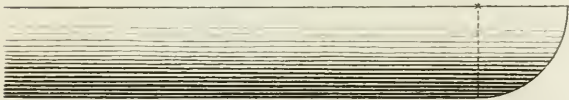
Cima recta .



Cavetto or hollow .



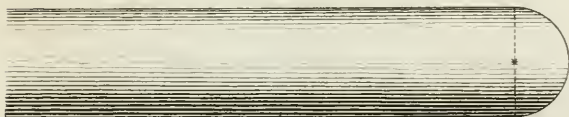
Ovolo or Quarter round .

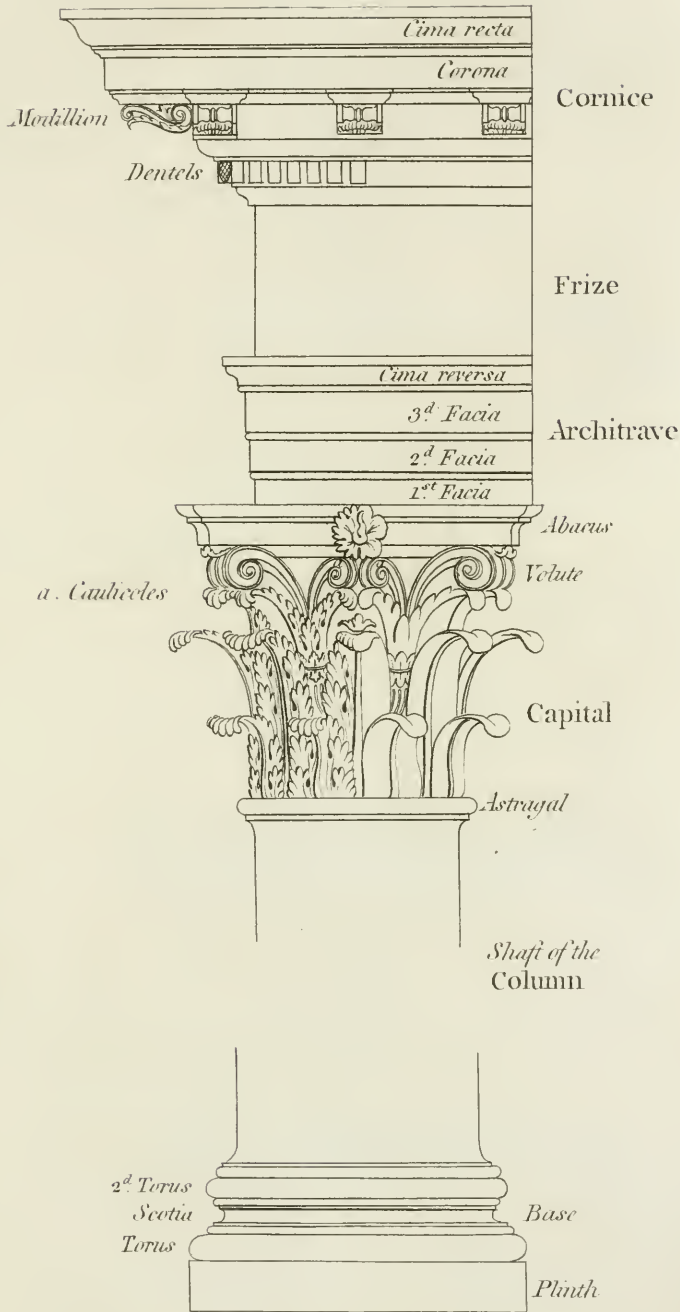


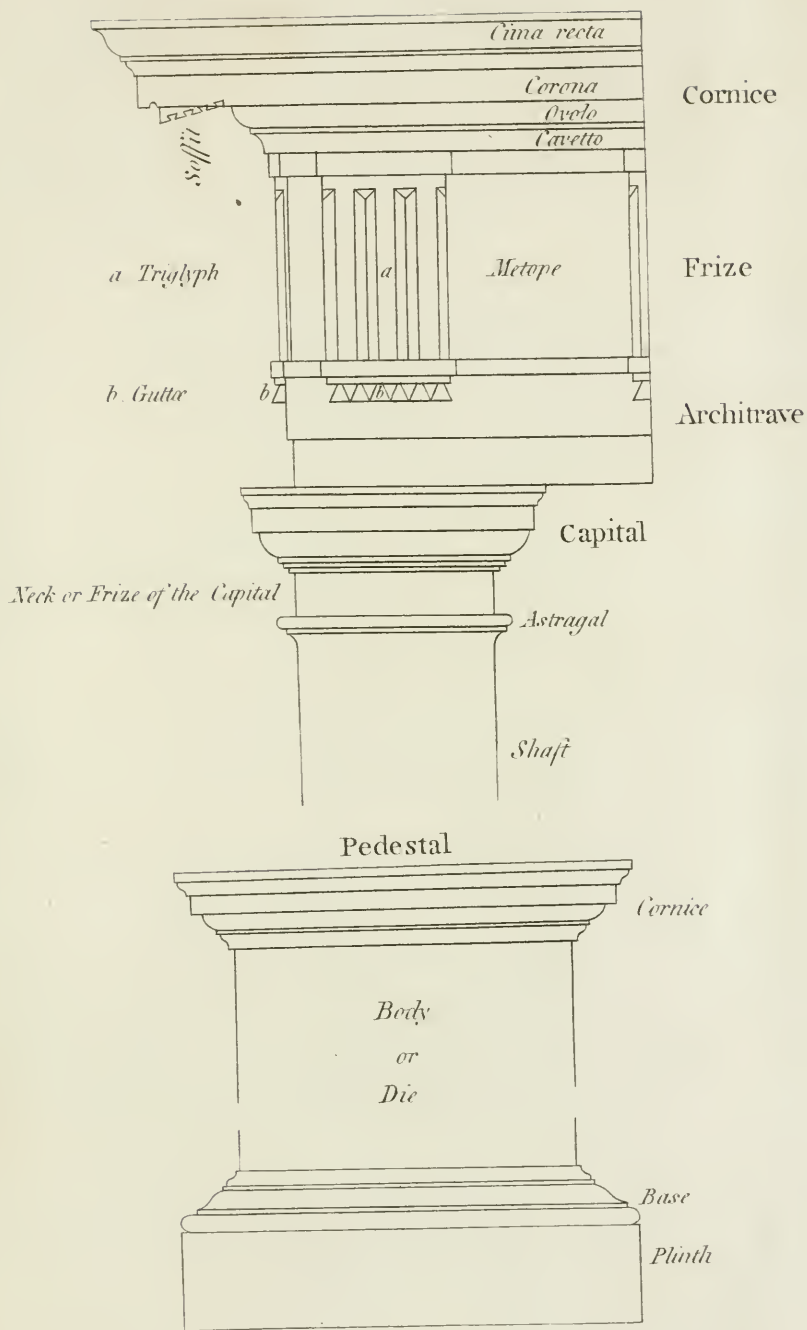
Scotia .



Torus .







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A

Ura

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